

01-22-01

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APR 2 4 2001 PATEN

Attorney Docket No. 1497 2007

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re A	Application of) Oroup Art Unit: 2811	
	Stephen E. Savas et al.) Group Art Unit: 2811	
Applic	cation No. 09/692,255) Examiner: Unassigned	75 27
Filed:	10/19/2000)	10 10 10 10 10 10 10 10 10 10 10 10 10 1
For:	Systems and Methods for Photoresist Strip and Residue Treatment in Integrated Circuit Manufacturing)))	EU ROOM

REQUEST FOR CORRECTED APPLICATION FILING RECEIPT

Assistant Commissioner for Patents

ATTN: Office of Initial Patent Examination

Customer Service Center

Washington, D.C. 20231

Sir:

There are errors with respect to the following, which are omitted, or misspelled:

Applicant(s)

Stephen E. Savas, Taiwan; John Zajac, San Jose, CA; Robert Guerra, Fremont, CA; Wolfgang Helle, Germany

Title

Systems and methods for photoresist strip and residue treatment in integrated circuit manufacturing

Application No. 09/692,255 Attorney Docket No. 14912.777 Page No. 2

Enclosed is a copy of the *Filing Receipt* outlined in red to show the corrections that are needed.

A copy of the first page of the application as filed indicating that Stephen E. Savas, John Zajac, Robert Guerra and Wolfgang Helle are the named inventors, submitted to the U.S. Patent and Trademark Office on October 19, 2000, and the post card acknowledging receipt of same by the USPTO are attached.

Issuance of a corrected Filing Receipt is respectfully requested.

The Commissioner is authorized to charge the fee of \$25.00 to Deposit Account 23-2415 (14912.777). The Commissioner is authorized to charge any other fees associated with this communication to the above Deposit Account.

Respectfully submitted,

WILSON SONSINI GOODRICH & ROSATI

Bv:

Michael J. Murphy

Registration No. 37,404

650 Page Mill Road Palo Alto, CA 94304-1050 (650) 493-9300

Date: January 19, 2001



Page 1 of 3 14 412-777 MM6



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 APPLICATION NUMBER
 FILING DATE
 GRP ART UNIT
 FIL FEE REC'D
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 DRAWINGS
 TOT CLAIMS
 IND CLAIMS

 09/692,255
 10/19/2000
 2811
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. 021971 WILSON SONSINI GOODRICH & ROSATI 650 PAGE MILL ROAD PALO ALTO, CA 943041050 FILING RECEIPT

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Date Mailed: 01/01/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Stephen E. Savas, Residence, NOT PROVIDED: TAIWAN; JOHN ZAJAČ, SAN TOSE, CA; ROBERT GUERRA, FREMONT, CA; WOLFGANG HELLE, GERMANY
Continuing Data as Claimed by Applicant

THIS APPLN CLAIMS BENEFIT OF 60/160,554 10/20/1999

Foreign Applications

If Required, Foreign Filing License Granted 12/29/2000

Title

in

Systems and methods for photoresist strip and residue treatment integrated circuit manufacturing

Preliminary Class

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Data entry by : ROBINSON, YOLANDA Team : OIPE Date: 01/01/2001

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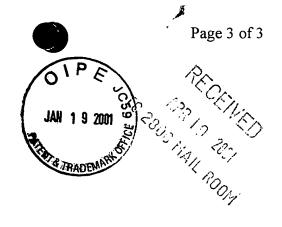
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- The title may be truncated if it consists of more than 600 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
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Any corrections that may need to be done to your Filing Receipt should be directed to:

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APR 2 4 2001

TC 1700



PATENT Attorney Docket No. 14912.727

SYSTEMS AND METHODS FOR PHOTORESIST STRIP ?? AND RESIDUE TREATMENT IN INTEGRATED CIRCUIT MANUFACTURING

Inventors:

Stephen E. Savas

John Zajac Robert Guerra Wolfgang Helle RECEIVED

APR 2 4 2001

TC 1700

BACKGROUND OF THE INVENTION

1. Reference to Related Application

This application claims priority to U.S. provisional application no. 60/160,554 filed October 20, 1999. U.S. application no. 60/160,554 is hereby incorporated herein by reference.

2. Field of the Invention

The field of this invention relates in general to semiconductor processing. More particularly, the field of the invention relates to systems and methods of stripping photoresist and removing residues from a semiconductor substrate.

10 3. Background

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Future semiconductor manufacturing technologies are expected to have stringent requirements for a variety of specific critical photoresist and residue removal processes, due in part to reductions in component size, increasing circuit speeds, and greater sensitivity of devices to surface contamination. These processes include, but are not limited to: 1) photoresist stripping following a high-dose ion-implantation (HDIS) process, 2) via cleaning, which means the removal of veils and residues following a via etch, particularly in the case where the dielectric layer through which the via is being formed is overlaying an aluminum or copper metallic layer, and 3) photoresist removal in the presence of a low-dielectric constant (low-k) material.

Current photoresist stripping methods are unable to cope with these new stringent requirements. For example, decreasing transistor sizes are making shallower and heavier doping levels necessary, which puts an additional burden on the photoresist mask used to protect the areas that will not be implanted. Another example has to do with vias, where

Title: SYSTEMS AND METHODS FOR PHOTORI	ESIST STRIP AND RESIDUE T	REATMENT IN IC MFG.		
Inventors/Applicant: SAVAS ET AL.				
Application Serial No.: NEW	Filing Date: .			
Type Of Application: Provisional Original	CIP X Continuation Divisional	□ CPA □ PCT		
X Transmittal of Patent Application X Specification and Abstract ✓S pages X Claims ✓II pages X Drawings ✓S pages Missing Parts of Application Transmittal □ Declaration/Oath □ Combined Declaration/Power of Attorney	☐ Fee Transmittal ☐ Filing Fee \$ ☐ Claims in excess \$ ☐ Surcharge \$	☐ Extension of time fee \$ ☐ Req-Corr Filing Receipt Fee \$ ☐ Issue fee/advance order \$ ☐ Other Fee \$		
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Express Mail Certificate NoEL341553302_US First Class Mail Authorization to Charge Deposit Account No. 23-2415	☐ Other:	1c932 U.S. PTO 09/692255		
Attorney: Michael J. MURPHY	Date Mailed. <u>OCT. 19, 2000</u>	10/19/00		

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